CLAIMS

What is claimed is:

1. An isolated and purified glycoprotein and functional analogues thereof characterized by:

(a) being expressed on at least primitive hematopoietic cells,

(b) being a ligand for L-selectin or E-selectin, the binding of ligand to L-selectin or E-selecting being uninhibited by anti-CD34 antibodies;

(c) being resistant to O-sialoglycoprotein endopeptidase activity;

(d) being unrecognized by MECA-79 a monoclonal antibody which identifies ligands of L-selectin on lymph node high endothelial venules; and

(e) being sulfation-independent.

2. An isolated and purified glycoprotein and functional analogues thereof as set forth in claim 1 wherein said glycoprotein is a membrane-associated glycoprotein.

3. An isolated and purified glycoprotein and functional analogues thereof as set forth in claim 1 wherein said glycoprotein functions as an adhesion protein ligand.

4. An isolated and purified glycoprotein and functional analogues thereof as set forth in claim 1 wherein said glycoprotein facilitates attachment of lymphocytes to hematopoietic cells.

5. At least one antibody directed against said glycoprotein and functional analogues thereof as set forth in claim 1.

6. A method of targeting cells expressing the glycoprotein as set forth in claim 1 including the steps of:

preparing a monoclonal antibody directed against the glycoprotein as set forth in claim 1,

preparing an immunotoxin utilizing the antibody,

exposing a population of cells to said antibodies, and

killing cells bound to the immunotoxin.

7. The method of claim 6 wherein the toxin is selected from the group consisting of ricin A chain, pseudomonas exotoxin A, diphtheria toxin and chemotherapeutic compounds.

8. The method of claim 6 wherein the cells are exposed to the immunotoxin *in vivo*.

9. The method of claim 6 further characterized by the cells being selected from the group consisting of leukemic cells, malignant hemopoietic progenitor cells and other malignant cells expressing the glycoprotein.

10. A method of selecting for cells expressing the glycoprotein as set forth in claim 1 including the steps of

preparing an antibody directed against the glycoprotein as set forth in claim 1,

exposing a population of cells to said antibodies, and

selecting cells bound to the antibody.

11. The method of claim 10 wherein said selecting step is selected from complement-mediated lysis, panning, cell sorting.

12. A method of regulating hematopoiesis including the step of:

selecting cells with an appropriate level of expression of the glycoprotein as set forth in claim 1 from a patient.

culturing the selected cells, and

reinfusing the patient with the expanded selected cell population.

13. A method of regulating inflammatory response by interrupting cellular migration into lymph nodes and sites of chronic inflammation including the step of administering to a patient functional analogues or antibody directed against the glycoprotein as set forth in claim 1.

14. The method of claim 13 further characterized by the inflammatory response being as found in the group selected from autoimmune disorders, post-ischemic tissue injury and sepsis.

15. A method of performing an overlay adherence assay by using cell suspensions as a substrate.

16. The method of claim 15 further characterized by preparing the single cell suspension substrate by depositing the single cell suspension on a slide using a modified sample chamber for use in a cytocentrifuge.

17. A method of making a cytocentrifuge sample chamber assembly by connecting together a slide and a sample chamber, the sample chamber including a cell substrate depositing port and fixing the cell substrate depositing port at one of a plurality of positions relative to the slide.

18. The method of claim 17 whereby said step of fixing the cell substrate depositing port at one of a plurality of positions relative to the slide is further defined as removing a lateral edge region from an end flange of the sample chamber thereby displacing the sample chamber laterally and/or vertically.

19. A cytocentrifuge sample chamber assembly comprising:

a sample chamber including cell substrate receiving means for receiving a cell substrate and depositing means for depositing a cell substrate on a slide surface during cytocentrifugation; and

connecting means for connecting together a slide and said sample chamber and fixing said depositing means at one of a plurality of positions relative to said connecting means.

20. A cytocentrifuge sample chamber assembly as set forth in claim 19 wherein said connecting means include an end flange with unequal sized side areas to allow lateral displacement of said depositing means.

21. A cytocentrifuge sample chamber assembly as set forth in claim 19 wherein said connecting means include a generally rectangular plate disposed normal to and along an end flange with a removed coextensive lower edge region of both said plate and said end flange to allow vertical displacement of said depositing means and said connecting means include a flat generally rectangular plate disposed normal to and along an end flange with a removed coextensive lower edge region of both said plate and said end flange and unequal sized side areas of said end flange to allow vertical and lateral displacement of said depositing means.

22. A cytocentrifuge sample chamber assembly as set forth in claim 22 wherein said receiving means include a funnel interconnected with said discharge port such that under cytocentrifugation a cell substrate disposed in said funnel enters said discharge port.

23. A kit consisting of a series of incrementally modified sample chambers, said incremental modifications allowing incremental vertical and lateral displacement of a sample chamber in a holder assembly thereby allowing deposition of a cell substrate at one of a plurality of positions on a slide.

24. A method of determining a pharmaceutical use by:

modifying L-selectin or E-selectin activity of a cell line; and

applying pharmaceuticals to said cell line which affect the modified selectin activity.

25. The method according to claim 24, wherein said applying step further includes modulating selectin activity with the pharmaceuticals.

26. A cell line expressing the glycoprotein as set forth in claim 1.

27. The cell line according to claim 26, wherein said cell line is developed by positive selection.